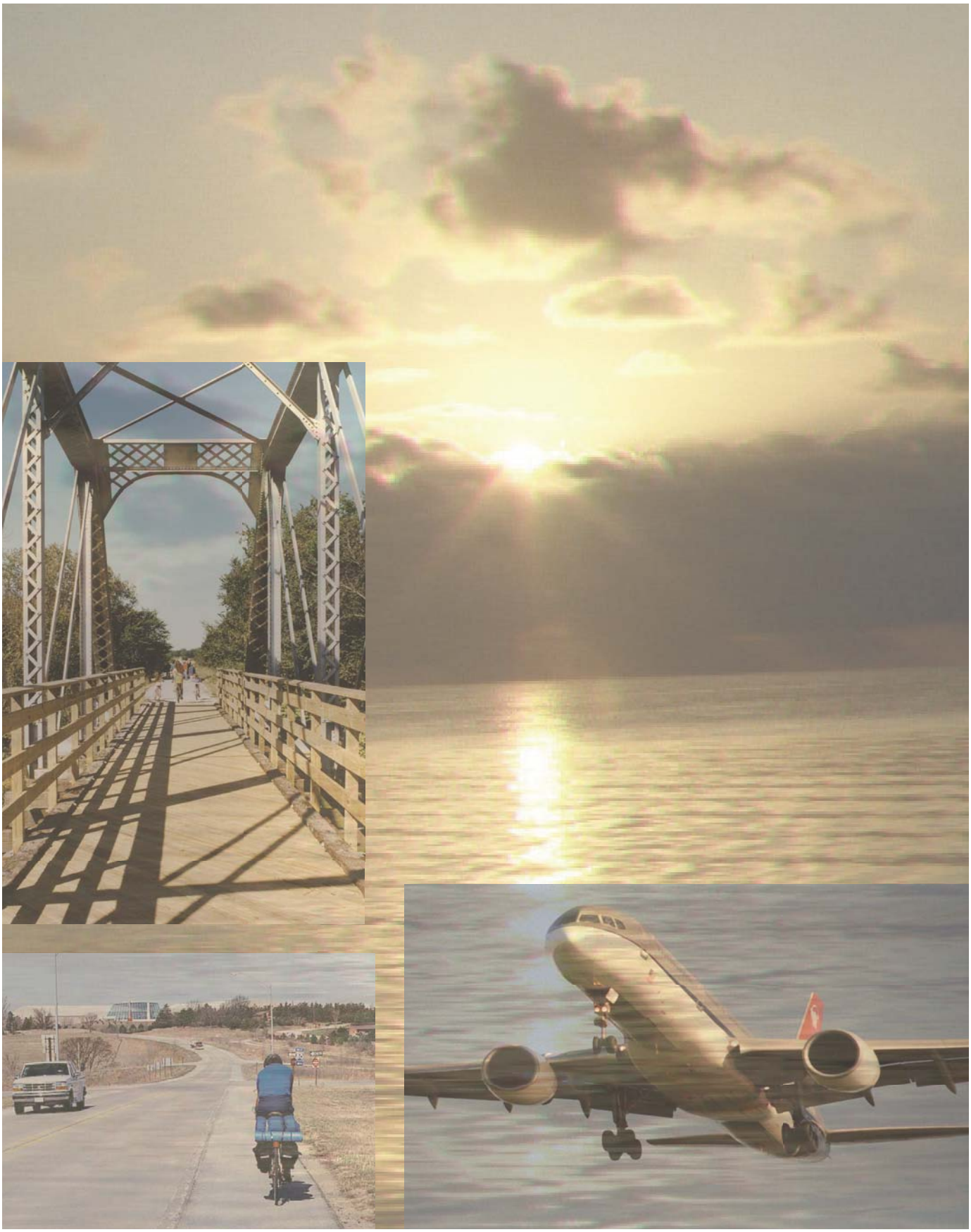
Nebraska

Long-Range Transportation Plan

2006



Introduction

Nebraska has a multimodal transportation network that parallels some of the finest systems in the nation. The state, counties, cities, transit agencies, railroads, and airports invest hundreds of millions of dollars annually to maintain and improve a system that is vital to the State's economy and the mobility of its citizens.

As the State of Nebraska moves forward into the 21st century, the Nebraska Department of Roads (NDOR) remains firmly dedicated to its mission to ***provide and maintain, in cooperation with public and private organizations, a safe, reliable, affordable, environmentally compatible, and coordinated statewide transportation system for the movement of people and goods.*** This Long-Range Transportation Plan (LRTP) supports NDOR's mission, providing the road map for future transportation development in Nebraska. It is a plan for all agencies involved in transportation to move Nebraskans safely and efficiently and to strengthen Nebraska's competitiveness in the national and world marketplace and improve our quality of life. In developing the Nebraska LRTP, NDOR served as the coordinator of a process to define the long-term goals, objectives, and needs for all elements of the State's transportation system.

Stakeholder Involvement in Developing the Plan

The planning process requires extensive outreach to citizens, elected officials, and transportation agency representatives from across the State to better understand issues that are important as the State develops a long-term plan for transportation. Gaining public input was a critical element in the effort to update the Nebraska LRTP and has helped to shape long-term goals and objectives in the LRTP. In an effort to reach out to broad interests, NDOR served as the facilitator for the process through four primary actions:

- Outreach at annual meetings in all transportation Districts;
- Transportation surveys sent to elected officials from across the State;
- Meetings with representatives of the three Nebraska Metropolitan Planning Organizations; and
- A major stakeholders meeting was held on March 2, 2005 with a broad spectrum of 39 stakeholders representing transportation in Nebraska.

Transportation Stakeholder Meeting – A Summary of Key Issues

The stakeholder meeting provided a forum through which leaders across the State, many of whom are involved in managing or planning transportation systems, were able to come together; to provide their perspectives on the issues, goals, and objectives that impact on transportation; and to reach some degree of consensus on the future direction of transportation in the State. Also, a number of issues specific to the LRTP itself were raised during the session addressing a wide variety of topics including the plan adoption process, the end product, and involvement of stakeholders. The stakeholders' comments gave rise to several themes inherent to advancing the LRTP. They are organized as follows.

Environment

Environmental stewardship received much attention from stakeholders, with comments relating to quality of life, as well as specific environmental concerns such as air quality, wetland banks, and environmental requirements. The potential was identified for exploring the use of alternative fuels, and investing in new technologies.

Mobility and Rural Access

Stakeholders identified issues regarding the maintenance of an appropriate level of service on the highway system and maintaining accessibility by both highway and alternative modes. A number of comments addressed the accessibility of particular areas for tourists and residents and the need to coordinate transportation services across modes to strengthen the interconnectedness of communities and to provide mobility, particularly in the more rural parts of the State.

Economic Development

Stakeholders stressed that maximizing Nebraska's transportation infrastructure assets is key to promoting economic development in the State. Recognizing that the free-flow of commerce is integral for Nebraska's competitiveness in national and global markets, transportation must continue to support economic development.

Goods Movement

Stakeholders addressed freight movement in several contexts: accommodating existing freight traffic; planning for future increases in the volume of freight moved across the State's rail and highway network; and assuring that freight investments maintain the State's competitiveness in the marketplace. Focusing on intermodal connections between highways and railroads will become increasingly essential as economic development in the State progresses. Given the importance of agricultural production to the State, robust intermodal connectors will continue to provide an important linkage for goods movement in and through the State. Increased freight movements on the State's rail system may also increase conflicts with highways in areas where at-grade crossings are still in place.

Safety and Emergency Preparedness

Participants noted that the events of 9/11 have changed transportation security and emergency preparedness across the nation. Nebraska's transportation community is sensitive to safety and security, especially with regard to protecting facilities against vulnerabilities and responding to transportation-related emergencies. Some of the issues raised were the need to improve safety on railroad rights-of-way, as well as to separate highway and rail traffic through grade separations, particularly for routes that serve as alternatives to I-80, which is one of the nation's most heavily traveled transcontinental highways.

Funding

The issue of funding was repeatedly raised. NDOR and other transportation agencies must manage with limited resources. Infrastructure funding is insufficient, including funding for local roads and bridges, for tribal roads and bridges, for the state highway system, and for other modes. New or enhanced funding sources are necessary.

Perceiving the Transportation Network in Nebraska as an Asset

Stakeholders also noted the value of the State's transportation system. (The State Highway System alone is valued at over $6.7 billion.) Promoting an understanding that the transportation network in Nebraska is an important asset helps to create value for customers. Uniting across agencies to promote a unified message about the transportation needs and the future of transportation in the State is important to maximizing the State's assets. The Nebraska LRTP can serve as a tool to communicate these needs, and provide a road map for how state and local agencies responsible for all modes can identify strategies and take actions.

Stakeholders also raised a number of other issues such as the State's demographic profile, including the growing elderly population, as well as conditions on tribal lands and transit service needs. Overall, the wide range of issues raised by the group played a key role in shaping the LRTP guiding goals and objectives.

The Existing Transportation System

Nebraska's Public Road System

The Nebraska highway and roadway network is the primary mode of transportation for both personal and freight travel within the State. There are 96,383 miles of roads in Nebraska, of which 9,959 miles (10.3 percent) are state owned. Overall, in 2004, there were 18.81 billion annual vehicle miles of travel (VMT) on Nebraska roadways, with approximately two-thirds of it on state-owned roads.

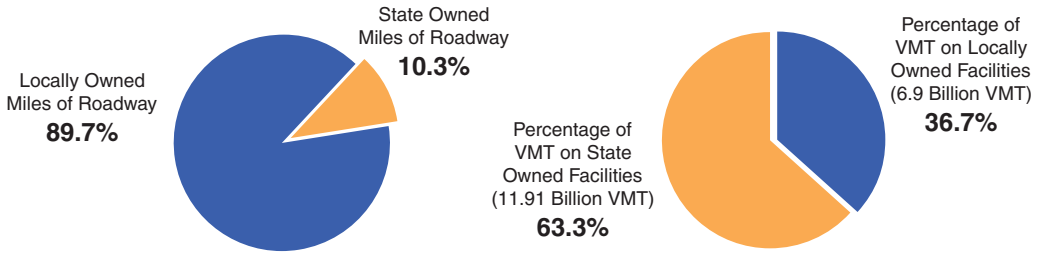


Figure 1. Roadway Ownership and Vehicle Miles of Travel

The differences in traffic volumes on various road systems are extreme. The urban and rural Interstate system in Nebraska comprises about one-half of one percent of the total state roadway system mileage, but carries 21 percent of all vehicle traffic. By contrast, Nebraska's rural local roads comprise about 65 percent of total system miles, but carry only six percent of vehicle traffic. An estimated 27.6 billion ton-mile of freight moved on Nebraska's highways in 2004 with 87 percent of this occurring on the state system.

Although much of the travel occurs on major roadways in the State, most of these trips begin and end on local roads. Because most of these roadways are important for a functioning transportation system, these lower volume roads cannot be neglected. Table 1 shows the road inventory by functional class, mileage, and ownership.

Table 1. Centerline Mileage of Nebraska Highways by Road Type and Ownership

By National Functional Classification – As of December 31, 2004

	Miles of Roadway		
Road Type	State (NDOR) Owned	Locally Owned	Total
Urban Areas			
Interstate	58	---	58
Principal Arterials	314	151	465
Minor Arterials	7	702	709
Collectors	-	440	440
Local Roads	-	4,246	4,246
Subtotal Urban	**379**	**5,539**	**5,918**
Rural Areas			
Interstate	424	---	424
Principal Arterials	2,700	---	2,700
Minor Arterials	4,175	---	4,175
Collectors	2,276	18,031	20,307
Local Roads	5	62,854	62,859
Subtotal Rural	**9,580**	**80,885**	**90,465**
Grand Total	**9,959**	**86,424**	**96,383**

Source: NDOR Materials & Research Division – January 13, 2005.

Roadway Conditions

Information on the condition of roadways across the State is primarily limited to the state system. NDOR uses the Nebraska Serviceability Index (NSI) to rate highway surface quality based on annual inspections. Ninety-six percent of the Interstate system is rated as "good" or "very good," while 88 percent of expressways and 85 percent of the total state highway system is so rated. Only three percent of the total state system is rated "poor." Of the entire state system, 87 percent is rated as "good" or "very good" in smoothness. The conditions of the roadways owned by counties and cities are not surveyed regularly.

Condition information is available for both state and other bridges. NDOR maintains the 3,526 bridges on state roadways while local governments are responsible for the remaining 12,102 bridges. Bridges on the state system, which carry much higher volumes, are in better condition than local bridges. Ninety-four percent of state bridges are classified as structurally sound and functionally adequate in comparison to 70 percent of local bridges.

Safety

Much of the focus of highway planning and investment is on improving the safety of the system. Nationally, the Federal Highway Administration (FHWA) is emphasizing safety. In 2004, there were 254 fatalities and 21,315 persons injured on Nebraska's roads. Nebraska's highway traffic fatality rate parallels the U.S. average, but has declined somewhat over the three years from 2002 to 2004. Nebraska now experiences 1.4 fatalities per 100 million miles of travel, in comparison to 1.5 nationally.

Public Transportation Services

Public transportation serves an important role in providing mobility and transportation choices for citizens of the State. Public transportation includes systems in major urban areas, rural and small urban area transit services, and intercity rail and bus services. Table 2 summarizes key statistics for the metropolitan transit systems. Each of these agencies also provides demand-responsive, door-to-door services within their areas. Rural counties primarily provide demand-responsive transit or paratransit. Currently, 74 of the 93 counties in Nebraska provide some form of transit service.

Table 2. Transit Providers in Nebraska Metropolitan Areas

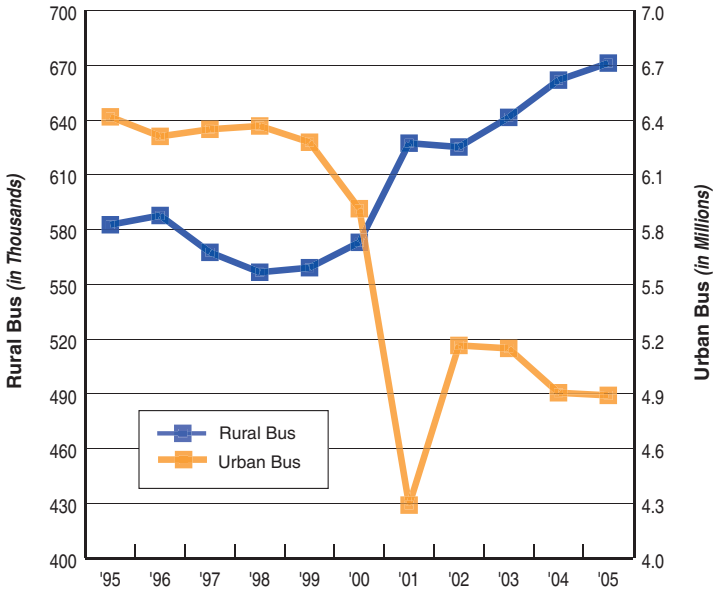
Transit System Indicator	Omaha *MAT*	Lincoln *StarTran*	Sioux City *SCTS*[a]
Fleet Size	119	68	18
Routes	29	21	1[a]
Annual Unlinked Trips	4,522,000	1,522,792	75,196
Annual Passenger Miles	17,487,000	4,938,000	188,758

[a]*One route serves South Sioux City.*

Source: 2004 National Transit Database Report; additional information was obtained from the web sites for MAT, StarTran, and Sioux City Transit System (SCTS).

In Omaha and Lincoln, annual transit ridership is lower today than it was 20 years ago. Transit services in Lincoln carried approximately 1.5 million trips in 2004, down from 3.5 million trips in 1981. Between 2002 and 2004, transit ridership in Omaha increased from 3.6 million trips to 4.5 million trips, while Lincoln ridership declined slightly. In 2005, there were about 670,000 passenger boardings for the 61 rural transit systems in the State. With an aging population, particularly in rural counties, the usage and demand for transit services are likely to grow. (Figure 2)

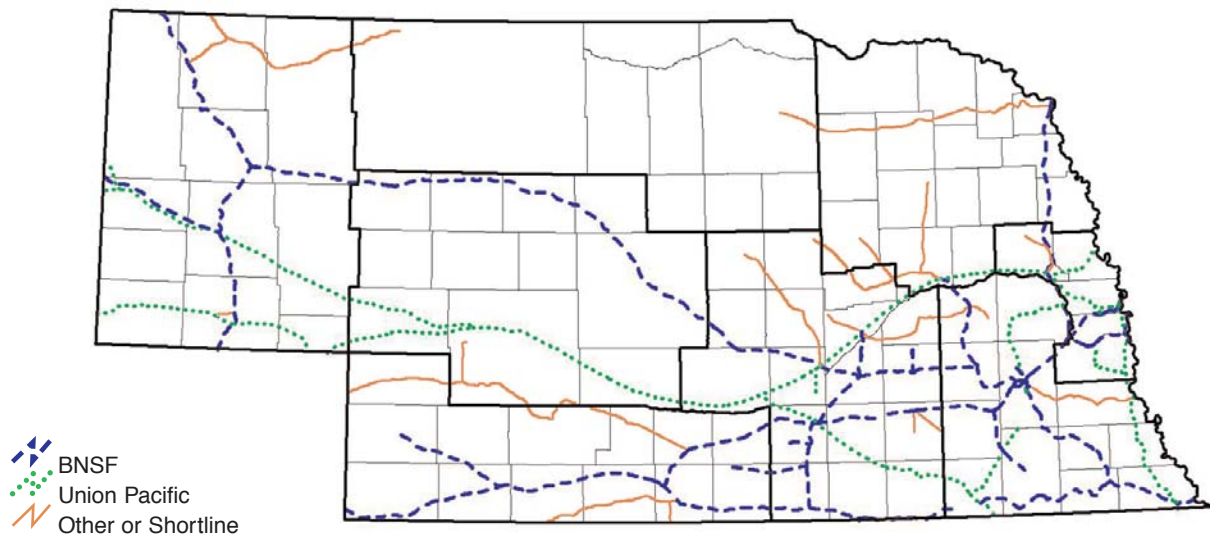
Figure 2. Public Transportation Passenger Boardings



Intercity Transportation Services

Intercity rail and bus service in Nebraska is limited. For those without access to a personal automobile, making trips between communities can be very challenging, particularly in rural parts of the State. Amtrak has one Nebraska route, the California Zephyr, which operates on freight railroad tracks owned by BNSF. This route runs one train per day in each direction between San Francisco and Chicago, with stops in Omaha, Lincoln, Hastings, Holdrege, and McCook. In 2004, there were 40,305 Amtrak boardings in Nebraska. This is a 5.6 percent increase over the 38,161 Nebraska Amtrak boardings recorded in 2001. During the same period nationally, Amtrak boardings increased 7.3 percent from 23.5 million in 2001 to 25.2 million in 2004. Private bus services also provide important connections between communities. In 2002, there were approximately 12,000 passenger boardings for Nebraska's intercity bus providers (excluding Greyhound). Most of these providers make one daily roundtrip for each of their routes.

Figure 3. Railroad Network and Ownership



NDOR Districts are outlined in bold

Source: Bureau of Transportation Statistics

Bicycle and Pedestrian Facilities

Nebraska has invested in multiuse trails to serve pedestrian and bicycle travel. Over the last decade, many miles of trails and bridges have been constructed and several communities are in the process of planning or constructing additional trails. A policy of extra width on state highways (paved shoulders) complements these trails for bicyclists.

Rail Freight

Nebraska has an extensive 3,466-mile rail freight system as shown in Figure 3. Rail carried an estimated 57 percent of the 33 billion ton-mile of freight originating in Nebraska in 2003. Farm products are the top commodity carried by rail from Nebraska. The impact of through rail traffic is also substantial, with some rail lines averaging more than 100 trains per day. Rail also presents a challenge to the State's highway system due to the extensive number of at-grade crossings. Frequent train service can cause disruptions in travel, particularly in areas where few other options are available. Nebraska had 6,553 rail-highway at-grade crossings in 2005.

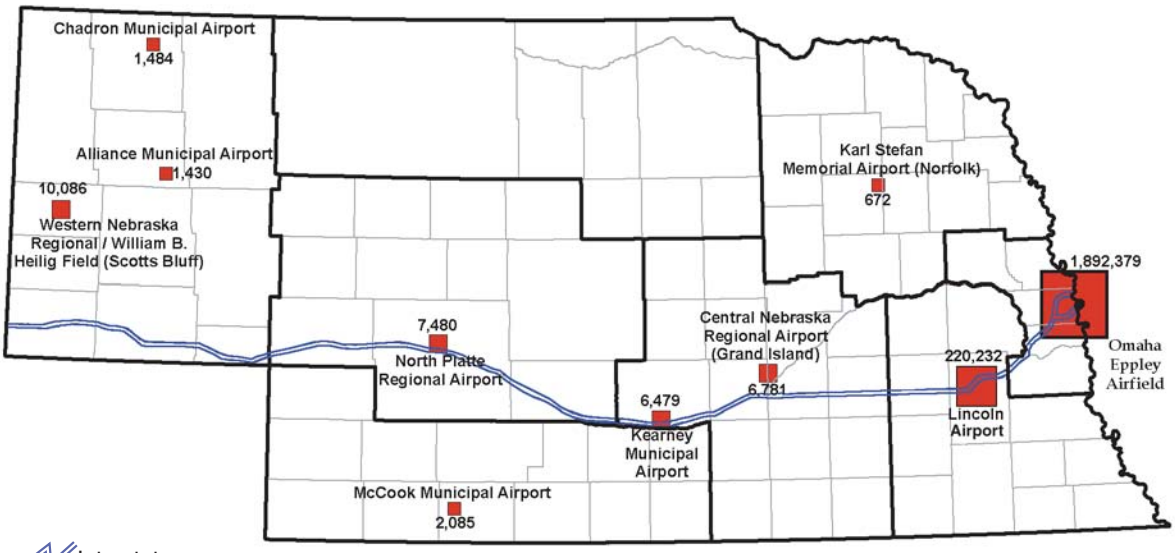
Inland Water Navigation

The Missouri River is the only route for Nebraska waterborne commerce. It is navigable from Sioux City, Iowa, to its junction with the Mississippi River, a length of 735 miles. In 2003, about 49,650 tons of commodities moved to and from Nebraska via the Missouri River.

Aviation System

There are 10 commercial airports and 88 general aviation airports scattered across the State with a total of more than 2 million commercial air passenger enplanements in 2004 (see Figure 4). Omaha and Lincoln together account for more than 98 percent of the statewide total. Eppley Airfield is the 66th largest airport in the United States in terms of number of passenger enplanements, and Lincoln Municipal is the 168th largest.

Figure 4. 2004 – Commercial Airport Enplanements



Source: Federal Aviation Administration

Future Transportation Challenges

In order to continue to provide mobility to the people of Nebraska over the next 25 years, transportation agencies across the State will need to find ways to proactively upgrade the transportation infrastructure in anticipation of the mobility needs of the future.

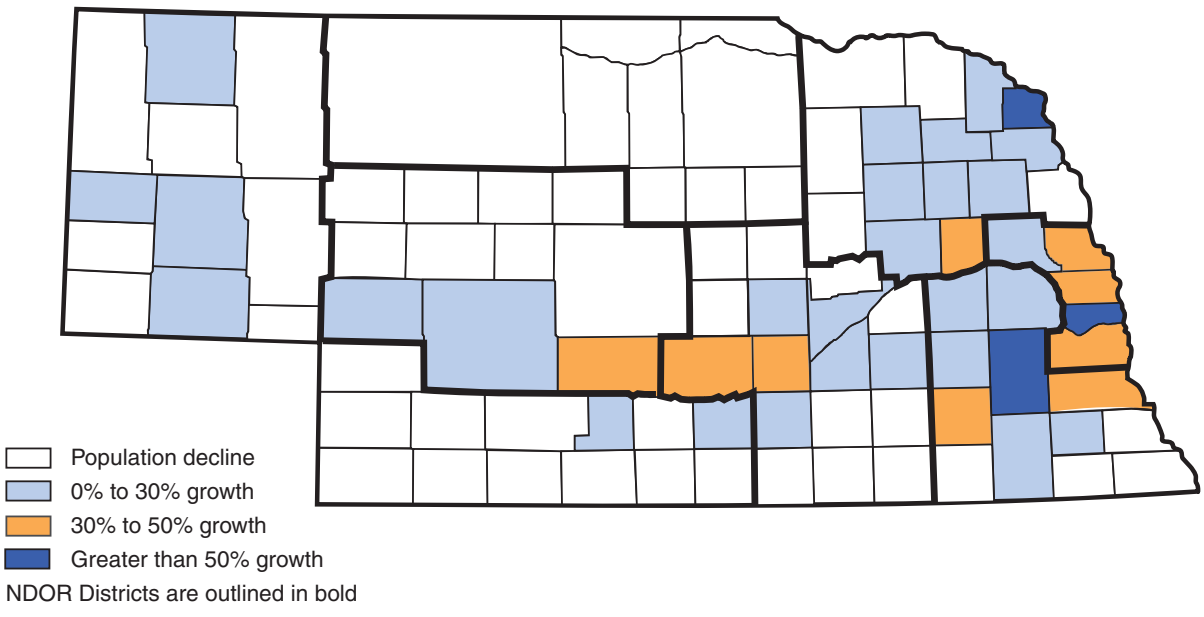
Nebraska Geography, Population, and Economy

The population of Nebraska is projected to increase from 1.71 million in 2000 to more than 2.20 million in 2025. As shown in Figure 5, most of the projected population growth is expected to occur in counties along I-80 and in the east with much of the growth occurring in the State's urbanized areas. More than 70 percent of statewide growth will occur in the three urban counties of Douglas, Lancaster, and Sarpy. Many rural counties in Nebraska are expected to lose population. Population forecasts for Nebraska suggest that much of the need for increases in transportation system capacity will continue to be in the eastern and urban areas of the State and along the I-80 corridor. However, the needs for infrastructure renewal, system preservation, mobility and accessibility, and maintenance will continue across the entire State.

These population trends raise three challenges. The first challenge is to find ways to maintain levels of service and to improve safety in the urban areas of the State as population growth and suburbanization result in localized congestion. The second challenge is to find ways to maintain the existing infrastructure in the rural areas of the State, including in those areas where the population, and the corresponding tax base, may be declining. The third challenge is to find an adequate balance between the previous two.

Nebraska is also facing an aging population. This will also present challenges to NDOR and other agencies, including finding ways to maintain mobility for a growing population of older residents. Table 3 shows the proportion of Nebraska's population by various age groups as it was in 2000 and as it is projected to be in 2025.

Figure 5. Forecast of Nebraska Population Change
2000-2025 Population Change



Source: University of Nebraska, Bureau of Business Research

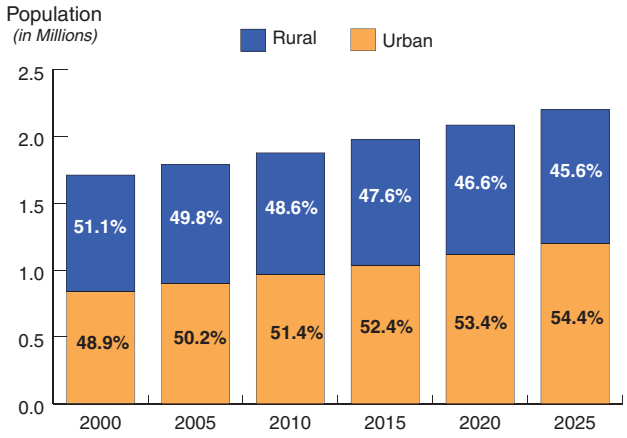
Vehicle Miles of Travel Forecasts

The problem of increasing future congestion is also indicated by NDOR and the metropolitan planning organizations (MPO) VMT forecasts for the road systems. As shown in Table 4, total VMT is expected to grow on the overall state highway system by 54 percent in 20 years, with the Interstate system experiencing the highest levels of growth, increasing by 69 percent.

Goods Movement

Nebraska's location, as well as its existing highway and rail infrastructure, will help to ensure the State's continued role as an essential freight corridor for the United States. FHWA's truck freight forecasts to the year 2020 indicate that truck VMT on Interstate 80 in Nebraska is projected to grow by an average of 3.2 percent per year, resulting in a doubling of I-80 truck traffic by 2020. As truck traffic volumes continue to increase along I-80, Nebraska will be presented with the challenges of managing congestion and improving safety. Intermodal connections between railroad yards and major highways are also an important part of the overall system for goods movement. They are essential to a growing economy and are particularly important to the State's agricultural sector. The rail system is used to ship a significant amount of the agricultural products produced in Nebraska, and trucks are used to get those products to the rail system.

Figure 6. Nebraska Population Projection



Population estimates for 2025 were extrapolated by county using the same growth rates as shown between the years 2015 and 2020.

Urban population is the sum of the populations of Douglas, Lancaster and Sarpy Counties. Rural population is the sum of the populations of the remaining counties.

Source: University of Nebraska, Bureau of Business Research

Table 3. Nebraska Population by Age Group
Actual in 2000 and Forecast for 2030

Age Group	Percent Total 2000	Percent Total 2020	Percent Total 2030
Under 18	26.3%	25.4%	25.1%
18 – 24	10.2%	8.9%	9.3%
25 – 44	28.5%	24.4%	23.2%
45 – 64	21.5%	24.1%	21.8%
65+	13.6%	17.1%	20.6%

Population data is collected and projected in ten-year increments.
Source: United States Census Bureau

Table 4. Forecast of Annual Vehicle Miles of Travel

System Roadway Type	2004 VMT (Billions)	Forecast 2024 VMT (Billions)	Percent Average Annual Growth 2004-2024	Percent Total Growth 2004-2024
Interstate	3.957	6.691	2.66%	69%
Other State Roads	7.950	11.696	1.95%	47%
State System Totals	**11.907**	**18.387**	**2.20%**	**54%**
Local Roads	6.905	9.113	1.40%	32%
System Totals	**18.812**	**27.500**	**1.92%**	**46%**

Source: NDOR

The Nebraska Long-Range Transportation Plan Goals and Objectives

A set of long-term goals and objectives have been established that will serve to guide future investment decisions for all elements of the State's transportation system. The goals and objectives are shown in Table 5.

Table 5. Goals and Objectives

Goals	Objectives
Safety Provide a transportation system that minimizes loss of life, health, and property.	• Reduce fatalities, injuries, and property damage on the state's transportation system.
Mobility **Preserve the System:** Maintain and preserve the transportation system. **Improve the System:** Enhance mobility and accessibility, and provide efficient connections for the movement of people and goods. **Operate the System:** Manage and operate the transportation system to improve reliability and capacity.	• Systematically replace and rehabilitate transportation assets to maintain or improve their condition. • Prepare for and provide effective and coordinated responses to incidents and emergencies. • Preserve the connections between communities and the transportation system. • Optimize the intermodal connection of people and goods. • Improve and expand the transportation system to increase capacity and reliability and enhance operations.
Environmental Stewardship Ensure that the transportation system is sensitive to the human and natural environment.	• Avoid, or minimize and mitigate the effects of transportation on the human and natural environment. • Coordinate environmental and socioeconomic issues with federal, state, regional, local, and tribal planning entities.

Transportation Needs, Costs and Revenues

Historically, Nebraska has provided transportation access to all communities in the State to allow economies to grow, to enable people to stay connected, and to ensure the smooth flow of goods. Current and future transportation needs and costs are defined and assessed along with forecasts of revenue that can be used to address them. These needs and costs are multimodal and encompass state highways, local roadways, transit, freight rail, bicycle and pedestrian travel, and aviation.

Needs are determined primarily by established criteria that include costs associated with maintenance, preservation, and system expansion. Revenues consist largely of taxes on motor fuels and vehicles, general fund appropriations, local property taxes, and special assessments. Various methods and source data were used to develop these needs, costs and revenues estimates. Some, such as those for the state highway system, are determined by agencies using well-established processes, while others, such as those for non-state rural roadways, were estimated using procedures established by other states.

Meeting the critical transportation investment needs and other future challenges will require adequate funding. The costs of future transportation system needs are currently projected to increase faster than the revenue needed to fund them. Much of the revenue used for transportation is generated by taxes on vehicles and fuel. High fuel costs may have

the effect of reducing fuel usage and therefore fuel tax revenue. State and local governments that rely on fuel tax revenues and sales tax on vehicles and the other agencies involved in addressing transportation needs, must address the challenge of how to raise the needed revenues to fund these improvements.

Highway and Roadway Needs, Costs and Revenues

Table 6 shows total highway capital needs and revenues through 2024 for Nebraska. Total revenues are projected to cover just 72 percent of total needs leaving a $6.4 billion funding gap for the period. This expected funding shortfall parallels the expected highway funding shortfalls at the federal level and in other states. Highway construction producer prices have increased very rapidly in the last three years (up 29.8 percent from the end of 2002 to the end of 2005 according to the U.S. Bureau of Labor Statistics), offsetting additional federal aid under SAFETEA-LU. The federal Highway Trust Fund Highway Account will fall short supporting the authorized funding levels after 2009.

A 2005 United States Chamber of Commerce Study "Future Highway and Public Transportation Financing," identified indexing of the federal motor fuel tax in the short term, and parallel revenue enhancements by states and local governments, as options to address the significant shortfalls. Other actions could include tolling new or existing facilities, raising other state and local taxes and fees, borrowing, and temporarily cutting back to emphasize only maintenance and operations. Of course, borrowing or cutting back does not reduce the long-term gap. They would only shift costs to the future while increasing total future costs. The Chamber Study identified fees on vehicle miles of travel as options, but only for the very long term. Actions to increase revenues for highways are needed well before vehicle miles of travel fees can be adopted. Any postponement of critically needed investments results in higher future costs.

Public Transportation

Public transportation contributes to the mobility of Nebraskans, provides linkages to jobs, schools, and services, helps reduce automobile VMT, and increases the capacity of urban transportation corridors. Both rural and urban areas have public transportation costs. Omaha, Lincoln and Sioux City costs are $1.171 billion for 2005-2024. Of these costs a total of $209 million is for capital investment, with the remainder for operations and maintenance (O/M). (Rural transit costs are not available.)

Table 6. Nebraska Highway and Roadway Capital Needs, Costs and Revenues
2005-2024 Expenditure Dollars in Millions

Roadway Category	Capital Costs	Revenues for Capital	Shortfall
State Needs	$11,099[a]	$6,710	$4,389
Non-State Urban	4,604	2,675	1,929
Non-State Rural[b]	1,740[b]	1,575	164
Total	**$17,443**	**$10,960**	**$6,483**

Note: State Roadway data were provided by NDOR. Data for Non-State Urban Roadways were developed using information from urban MPOs, while data for Non-State Rural Roadways were developed using information from Highway Statistics.

[a] *Needs include system improvement and system preservation, rail grade crossing and signal safety needs, and a 3% yearly inflation factor.*

[b] *Only includes the capital costs for paved roadways. All investment on gravel roadways is considered to be maintenance.*

Freight Rail

Although railroads are privately owned and operated, their condition and performance impact the demand for highway freight movement and therefore highway needs. An approximation of rail needs and costs has been developed based on available national reports on freight rail costs and on NDOR estimates of rail grade crossing and signal safety needs. Table 7 summarizes the freight rail capital costs according to the categories of: 1) shortline railroad, 2) Class I railroad infrastructure, and 3) Class I railroad non-infrastructure. Rail crossing and other rail signal safety needs are also listed.

Table 7. Annual Freight Rail Capital Costs for Nebraska

Needs Category	Estimated 2005 Capital Costs ($ Millions)	Estimated 20-Year Costs (2005-2024) ($ Millions)
Shortline	$ 11	$ 305
Class I – Infrastructure	110	3,044
Class I – Non-Infrastructure	49	1,356
Total	**$170**	**$4,705**
Rail Grade Crossing and Signal Safety Needs[a]	*22*	*609*

[a] *Included in the State and Non-State Highway needs estimates.*

Table 8. Regional and Community Trail Costs

Trail Category	Existing Miles	Planned Miles	Planned Trail Costs ($ Thousands)
Regional Trails	157	1,107	$ 67,359 [a]
Community Trails	403	859	224,431 [b]
Totals	**560**	**1,966**	**$291,790**

[a] *All regional trails are assumed to be constructed of limestone/granular stone materials. Trail construction cost is assumed to be $30,000 per mile for the Cowboy Trail and $50,000 per mile for all other trails. Cost estimates are based on the last two years of NDOR transportation enhancement funding for multiuse trails.*

[b] *Construction cost for limestone community trails is assumed to be $50,000 per mile, while construction cost for concrete community trails is assumed to be $250,000 per mile. Cost estimates are based on the last two years of NDOR transportation enhancement funding for multiuse trails and Table 6.4 in the ANOD II document.*

Bicycle and Pedestrian Costs

Pedestrian and bicycle travel are elements of Nebraska's transportation system. For the purposes of this report, pedestrian and bicycle costs are focused on dedicated trail facilities. Nebraska has a statewide trails plan entitled, A Network of Discovery: A Comprehensive Trails Plan for the State of Nebraska (ANOD II). According to this plan, multiuse trail costs throughout the State are estimated to be $292 million over the next 20 years with $224 million of this for trails within communities and $67 million for statewide and regional trails (see Table 8).

Airport Costs and Revenues

Scheduled air service as well as general aviation is supported by the 88 airports (and one seaplane base) located in Nebraska. Data from the Nebraska Airport Capital Improvement Plan – Fiscal Years 2005 - 2024, capital needs for all Nebraska airports total $727 million over the next 20 years, of which 85 percent ($616 million) have identified revenue sources (see Table 9). Needs of the two largest airports, Lincoln and Omaha-Eppley, amount to just over one-half of the statewide total ($365 million of the $727 million total).

Table 9. Airport Capital Costs and Revenues
2005-2024 Expenditure Dollars in Millions

Airports	Capital Costs[a]	Revenues[b]	Shortfall[c]
Omaha-Eppley & Lincoln	$365	$365	$ 0
All Other Airports	$362	$251	$111
Total	**$727**	**$616**	**$111**

[a] *Sum of funded and unfunded capital projects.*
[b] *Sum of federal, state and local revenues.*
[c] *Difference between costs and revenues which equals sum of unfunded projects.*

Table 10 shows the results of combining all of the modal costs. All told, Nebraska's multimodal transportation costs for the next 20 years total more than $23 billion. The vast majority of these identified costs are on the State's highway and roadway systems.

Excluding freight rail costs, which are funded primarily by private means, highway needs account for the large majority of all identified transportation costs in the State. These costs are defined assuming that the existing system should be maintained in a satisfactory condition and that highways and roads should provide an appropriate level of service in terms of speed and safety. If actual revenues fall below those required to meet the identified costs, infrastructure deterioration and/or reductions in levels of service can be expected to occur relative to the size of the shortfall.

Table 10. Estimated Capital Needs and Costs for All Nebraska Transportation Modes
2005-2024 Expenditure Dollars in Millions

Category	Capital Costs [a]
NDOR's Highway Needs	$11,099
Other Agencies Highways	6,344
Total Highway	**$17,443**
Omaha-Lincoln-Sioux City	$ 209
Rural	N/A
Total Transit	**$ 209**
Total Freight Rail [b]	**$ 4,705**
Primary Regional Trails	$ 67
Community Trails	224
Total Bicycle & Pedestrian	**$ 292**
Omaha-Eppley & Lincoln Municipal	$ 365
Other Airports	362
Total Airport	**$ 727**
Total Multimodal Needs and Costs	**$23,376**

[a] *Costs include a 3% yearly inflation factor.*

[b] *Rail grade crossing needs are in the highway category and not in the freight rail category to eliminate double counting.*

Economic Impacts

All projects support and strengthen the Nebraska economy. Nebraska's existing highway needs are soundly based on engineering economic analysis. The concept of adding projects on the basis of potential economic development is over and above the currently established definition of needs. Because positive economic impacts already occur due to highway projects that are based on existing needs, the consideration of additional economic development concerns would not likely change relative priorities. Therefore, current prioritization procedures should remain in place.

Nebraska Department of Roads' Response

The Nebraska LRTP represents the State's long-range guideline for multimodal transportation. Long-range transportation planning is a process that builds upon the past and studies the present to help prepare for the challenges of the future. The goals established for this LRTP are: mobility, safety, and environmental stewardship. In support of this effort, NDOR has taken the next step to establish performance targets and define specific strategies that will begin to focus on meeting the LRTP's goals and objectives. Although NDOR is just one of many agencies responsible for the State's transportation system, these performance targets and strategies can serve as examples for potential next steps for other implementing agencies.

Safety

Moving people and goods across Nebraska's transportation system in a safe way is a State priority. Table 11 presents the goals, objectives, performance targets, and strategies for meeting Nebraska's safety needs.

Mobility

Given the current and projected mobility needs of the State, actions should be outlined in order to address future transportation demand. Table 12 presents the goals, objectives, performance targets, and strategies for meeting Nebraska's mobility needs.

Environmental Stewardship

NDOR is committed to its role as an environmental steward and to preserving and protecting the environmental features and resources of the State. Table 13 presents the goals, objectives, performance targets, and strategies for meeting Nebraska's environmental needs.

Table 11. Safety

Goal:

Provide a transportation system that minimizes loss of life, health and property.

Objective:

- Reduce fatalities, injuries, and property damage on the State's transportation system.

Performance Target:

- Reduce the fatality rate on the state and local highway systems to below 1.0 per 100 million vehicle miles of travel (VMT).

Strategies:

Plan and implement measures of the Nebraska Strategic Highway Safety Plan:

- Improve data collection, management, and analysis to better target safety actions.
- Target activities to reduce roadway departure crashes (review of accident causes for potential engineering solutions, enforcement of careless driving regulations).
- Target activities to reduce intersection crashes (alcohol and speed enforcement, addressing railroad crossing issues, targeted roundabout construction).
- Target activities to reduce work zone crashes (enforcement, development of a Traffic Management Center, targeted enforcement for motor carriers, District work zone reviews, NDOR staff training).
- Target programs and actions to decrease alcohol-related injuries and fatalities (e.g., education and outreach, enforcement, and roadside inspections of motor carriers).
- Target programs to increase the use of occupant restraints (education and outreach, enforcement, roadside inspections, and child passenger seat inspections).
- Target programs and activities to reduce unsafe speed (enforcement, enhanced equipment for law enforcement).
- Target outreach and enforcement for youth drivers.
- Address motor carrier accidents with targeted strategies (increased inspections, maintenance of CDL program and removal of unsafe drivers, compliance reviews of high-risk carriers, education on new regulations).

Table 12. Mobility

Goal:

Preserve the System
Maintain and preserve the transportation system.

Objectives:

- Systematically replace and rehabilitate transportation assets to maintain or improve their conditions.
- Preserve the connections between communities and the transportation system.
- Optimize the intermodal connection of people and goods.

Performance Targets:

- Maintain the quality of the pavement condition in terms of the Nebraska Serviceability Index (NSI) so that at least 84 percent of the miles are rated good or very good each year.
- Maintain the smoothness of the pavement in terms of the International Roughness Index (IRI) so that at least 84 percent of the miles are rated good or very good each year.
- Maintain and improve the bridges on the state system so that 95 percent of them are structurally sound and functionally adequate each year.

Strategies:

- Use timely inspections and Pavement Optimization Program (POP) outputs to determine needs, maintenance, and construction activities.
- Use timely inspections and the bridge optimization programs to determine needs, maintenance, and construction activities.
- Annually distribute adequate funds to meet infrastructure preservation needs as a first priority.

Table 12. Mobility *(cont'd.)*

Goal:

Improve the System
Enhance mobility and accessibility, and provide efficient connections for the movement of people and goods.

Objective:

- Improve and expand the transportation system to increase capacity and reliability and enhance operations.

Performance Targets:

- Support statewide economic development through coordination of transportation planning activities of state, regional, local, tribal, and private entities.
- Complete the Priority Commercial System.[a]
- Complete the remaining 179 miles of the 600-mile expressway system.[b]
- Program improvements to maintain the Rural Freeway System at Level of Service C or better and the Urban Freeway System at Level of Service D or better.[c]

Strategies:

- Improve the highway system based on traffic needs.
- Distribute all funds allocated to transit to support rural transit systems and provide education and training.

[a] *Nebraska's priority commercial system includes the primary highways that serve commerce.*

[b] *Planned expressways and requested projects will not be considered for traditional funding until they meet established needs criteria.*

[c] *Level of service C – Stable flow, but speeds and maneuverability are more closely controlled by the higher volumes; Level of service D – Tolerable operating speeds, though considerably affected by changes in operating conditions.*

Goal:

Operate the System
Manage and operate the transportation system to improve reliability and capacity.

Objective:

- Prepare for and provide effective and coordinated responses to incidents and emergencies.

Performance Targets:

- Reduce the average time after an incident for getting roadways back to normal operation.
- Improve the reliability of the statewide Interstate System.

Strategies:

- Develop and implement a statewide, broadband communications system for emergency response, incident management, and large data file transmissions.
- Develop an alternative routing system.
- Expand the Highway Condition Reporting System (HCRS) to improve data collection to better track effect of incident management on delay.
- Develop incident management plans with law enforcement.
- Continue to enhance 511 system.
- Develop a freeway management system.

Table 13. Environmental Stewardship

Goal:

Ensure that the transportation system is sensitive to the human and natural environment.

Objective:

- Avoid, or minimize and mitigate, the effects of transportation on the human and natural environment.
- Coordinate environmental and socioeconomic issues with Federal, state, regional, local, and tribal planning entities.

Performance Targets:

- Apply environmental reviews to all projects.
- Fulfill all environmental commitments on all projects.
- Ensure no net loss of wetland acres and strive to match or exceed the number of acres filled with replaced acres.
- Maintain a positive balance of developed wetland mitigation bank acres for future needs.

Strategies:

- Develop an Environmental Management System to ensure implementation of environmental commitments.
- Inventory and implement best practices.
- Inventory endangered species, historic sites and bridges, hazardous materials sites, and flood plains. Determine impacts and mitigation needs.
- Conduct early project reviews for wetland, noise, and air impacts and need for mitigation.
- Develop wetland mitigation banks.
- Develop and implement a storm water management program including inspection, construction, and certification.

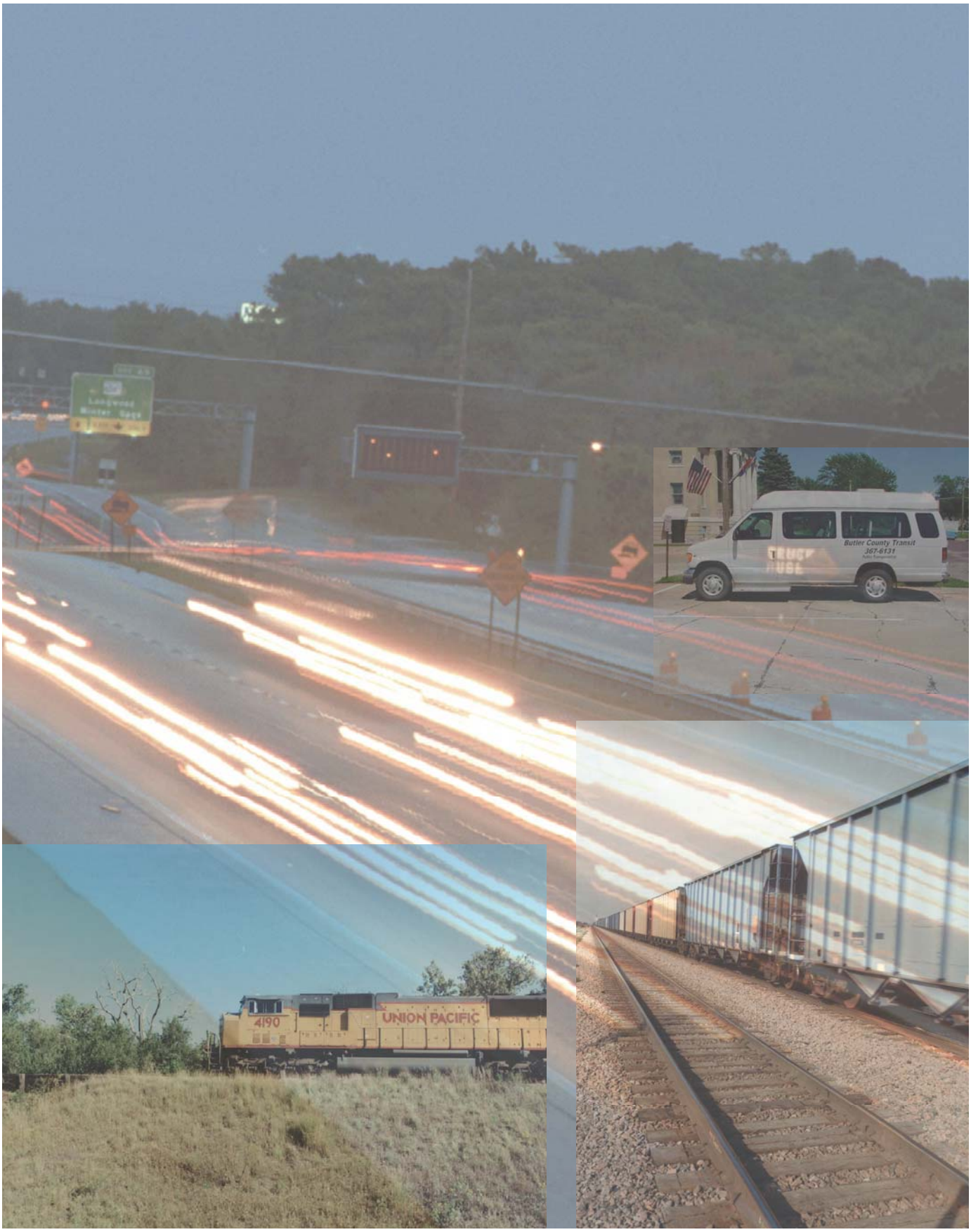
Next Steps

LRTP goals and objectives create long-term guidelines for Nebraska. The goals and objectives of the Plan are meant to apply to other modes and to other agencies involved in transportation in Nebraska. The costs for the modes that are estimated in this plan are desirable transportation investments, although some agencies' costs may not have been developed to the same degree or level of detail as the Nebraska State Highway Needs. Nebraska's state highway needs are updated every year. It would be appropriate to update this long range plan every four or five years, including the costs for local roads and other modes.

Implementing the Nebraska LRTP for other modes and other agencies may be achieved by building upon the example set forth by NDOR. Four important implementation elements: 1) needs estimates; 2) revenue estimates; 3) estimates of the gap between needs and revenues; and 4) performance targets and strategies, which have been addressed by NDOR, provide useful examples of activities that each agency could undertake to implement this plan. NDOR has developed an annual state highway needs estimate and, to implement this LRTP, has also developed performance targets and strategies for meeting the goals and objectives of the Plan, (see Tables 11, 12, and 13). Recommended implementation steps for other agencies to carry out the goals and objectives of the Nebraska LRTP are:

- Costs should be assessed periodically for other modes and other agencies. Costs for other modes and agencies were estimated for the Nebraska LRTP, but these elements of the plan are one-time approximations. Nebraska's MPOs estimate local highway investment costs periodically. Periodic cost assessments could be considered by other agencies because cost estimates provide important information for governing bodies, including whether current resources are sufficient.
- Revenue as well as the gap between revenue and cost should also be forecast regularly by other agencies. Only with such information can the public and legislative bodies understand whether an agency is on track to provide the services that its customers need. Agencies such as the Metropolitan Area Planning Agency (MAPA) in the Omaha metropolitan area and the City of Lincoln/Lancaster County Metropolitan Planning Organization have already undertaken the task of estimating the gap between revenues and costs.
- Performance measures monitor progress toward achieving a goal. Therefore, performance targets and strategies should be used to manage investments and to monitor progress. The types of performance targets and strategies for implementing the goals and objectives developed for NDOR may also be considered by other agencies and for other modes. These have not been approximated in the Nebraska LRTP because they are implementation steps and are the specific responsibility of the designated agencies. The performance targets and strategies through which other agencies will address goals and objectives could be prepared by those agencies directly, but in the same format as those prepared for NDOR performance targets and strategies above.

Appendix is available at www.dor.state.ne.us/lrtp/index.htm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